

CLAIMS

1. A dispensing system for a volatile liquid, comprising:
a fan adapted to generate an air stream; and
5 a capillary member having a body, in which a portion of the body is positioned within the air stream with the fan activated; in which the portion of the body is impervious to passage of the air stream therethrough in a direction of the air stream and in which the air stream passes unobstructed over opposing surfaces of the capillary member aligned generally transverse to the direction of the air stream.
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2. The dispensing system of claim 1 in which the dispensing system includes a housing in which the portion of the body and the motorized fan are positioned within an enclosure of the housing.
- 15 3. The dispensing system of claim 1 wherein the capillary member is in communication with a reservoir for holding the volatile liquid.
4. The dispensing system of claim 1 wherein:
a blade of the fan has a dimension R extending from an axis of rotation
20 of the fan blade to an edge of the fan blade farthest from the axis of rotation; and
the portion of the body of the wick is positioned to be immersed in the air stream generated by the fan, in which the body of the wick has a width W which does not exceed $1.2R$.
- 25 5. The dispensing system of claim 1 further comprising a guide associated with the fan and defining an opening, having a predetermined dimension, to selectively receive the capillary member and to position the portion of the body such that the portion of the body is in the air stream when the fan is activated.
- 30 6. The dispensing system of claim 5 wherein the dispensing system includes a housing to which the fan is mounted and the guide comprises opposing sidewalls defining an opening in the housing.

7. The dispensing system of claim 5, wherein a fan blade of the fan has a length R measured from an axis of rotation of the fan to the farthest end of the fan blade away from the axis of rotation and wherein the predetermined dimension of the opening does not exceed 1.25 R.

8. The dispenser of claim 5, wherein the guide is adapted to position the capillary member within a cylindrical volume centered along an axis of rotation of the fan and having a radius which extends from the axis of rotation to the farthest extension of a fan blade of the fan.

9. The dispensing system of claim 1 wherein the capillary member has an external surface and a discontinuity in the surface providing a location in the capillary member having less resistance to a force applied to the capillary member than a location adjacent to the discontinuity.

10. The dispensing system of claim 9 wherein the discontinuity is formed by a junction between the portion of the capillary member and another portion of the capillary member adjacent the portion of the capillary member having a different cross sectional area than the portion of the capillary member.

11. The dispensing system of claim 1 wherein the capillary member includes a first section formed using a material with a predetermined pore size and a second section formed using a material with a predetermined pore size that is different from that of the material of the first section.

12. The dispensing system of claim 11 wherein the ratio of the pore size of the second section to that of the first section is greater than about two.

13. The dispensing system of claim 1 wherein the dispensing system operates at ambient room temperature.

14. The dispensing system of claim 1 wherein a motor for the fan turns the fan according to a predetermined cycle when power is supplied to the motor, the cycle comprising a motor "on" period of a predetermined length of time and a motor "off" period of a predetermined length of time.

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15. The dispensing system of claim 14 wherein the ratio of predetermined period of length of time of the motor being "on" to the predetermined length of time of the motor being "off" is approximately 1 to 3.

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16. The dispensing system of claim 1 wherein another portion of the capillary member is positioned inside a reservoir containing the volatile liquid.

17. A dispensing system for a volatile liquid, comprising:

a dispenser having a housing defining an interior;

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a fan coupled with the housing and adapted to generate an air stream; and

a capillary member having a portion positioned to be immersed in said air stream in which the portion of the capillary member is spaced apart from any interior portion of the housing.

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18. The dispensing system of claim 17 wherein the portion of the capillary member is positioned within a cylindrical volume centered along an axis of rotation of the fan and having a radius which extends from the axis of rotation to the farthest extension of a fan blade of the fan.

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19. The dispensing system of claim 17 wherein the dispensing system operates at ambient room temperature.

20. The dispensing system of claim 17 wherein the portion is positioned generally transverse to an axis of rotation of the fan.